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THE USE OF AGRICULTURAL LIMESTONE UNDER THE RE-  
VISED 1938 AGRICULTURAL CONSERVATION PROGRAM

Address given by C. C. Farrington, Assistant to the Administrator, Agricultural Adjustment Administration, at the annual convention of the National Crushed Stone Association held at the Netherlands-Plaza Hotel, Cincinnati, Ohio, 2:30 p.m. (EST) January 24, 1938.

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I appreciate this opportunity of meeting with you and discussing with you the provisions of the 1938 Agricultural Conservation Program as they relate to the use of agricultural limestone.

At your convention a year ago Mr. Joseph Cox, of the Program Planning Division of the Agricultural Adjustment Administration, discussed with you the value of agricultural limestone in a national program for the conservation of the soil.

Over a period of years the Department of Agriculture, through its research and demonstration work and farmers' bulletins, has promoted the use of agricultural limestone. In 1936, however, the Department began a new type of activity designed to accelerate the adoption of improved farm practices, the value of which had been proved by years of experimental and demonstration work. This new activity involved the use of payments or grants to assist and encourage farmers to adopt these improved farm practices. These payments or grants are made under the Agricultural Conservation Program by authority contained in Sections 7 to 17 of the Soil Conservation and Domestic Allotment Act, approved February 29, 1936.





I believe it is only fair to say that the Agricultural Conservation Programs have been highly effective in bringing about the adoption of a number of improved farm practices. This is particularly true of the application of ground limestone as a means of promoting the growth of soil-conserving crops and improving pastures.

The use of agricultural limestone practically doubled between 1935 and 1936, and payments were made under the 1936 Agricultural Conservation Program on over one half of all of the agricultural limestone applied in the United States that year. Payment for the application of agricultural limestone was made under the 1936 program in 37 States and under the 1937 program in 38 States.

Provisions relating to the use of agricultural limestone as an approved soil-building practice are included in the program for 1938 and probably will be approved for each of the individual States except a few of those in the western part of the United States where the use of limestone is not generally recommended.

Estimates released by the National Lime Association indicate that about 6,300,000 tons of agricultural limestone were used in 1936 as compared with 3,300,000 tons in 1935. The use of agricultural limestone in 1936, therefore, was almost double what it was in 1935. It was also about 70 percent greater than it was in the year 1929. The sharp increase in the use of agricultural





limestone in 1936 undoubtedly should be attributed largely to the 1936 Agricultural Conservation Program. As a specific example, one county agricultural agent recently reported that a few years ago he made a special effort to increase the use of limestone in the county but succeeded only in getting five tons used. In 1936 about 1,500 tons were purchased by farmers in the county and applied under the program.

The increase in the use of agricultural limestone in the United States between 1935 and 1936 was about 3,000,000 tons. The total amount of limestone with respect to which payment was made under the 1936 program was slightly more than 3,600,000 tons. This increase in the use of agricultural limestone in 1936 was general throughout the eastern part of the United States. An increase was recorded in practically every State and these increases are closely related to the amount of limestone on which payments were made under the 1936 program. For example, in the northeastern States - the New England States and New York, New Jersey and Pennsylvania - payments were made on about 375,000 tons of limestone and the use of agricultural limestone was increased about 227,000 tons between 1935 and 1936. In the ten North Central States, extending from Ohio on the east to Nebraska on the west, payment was made on about 2,111,000 tons under the 1936 program, and the use of agricultural limestone increased about 1,945,000 tons. In the States of the East Central Region - Kentucky, Tennessee,





North Carolina, Virginia, West Virginia, Maryland, and Delaware -- payment was made with respect to approximately 1,103,000 tons, and the use of agricultural limestone was increased about 785,000 tons.

Comparable figures are not yet available with respect to the 1937 program, but reports so far received indicate a continuation of the increased use of agricultural limestone.

I assume that most of you who are engaged in the production of agricultural limestone are more or less familiar with the provisions of the 1936 and 1937 programs relating to the use of agricultural limestone. As you know, a soil-building allowance was established for each farm and producers could earn payments up to the amount of this allowance by adopting one or more of the various approved farming practices. Specific rates of payment were provided for carrying out these practices. For example, the usual rate of payment for the seeding of alfalfa in 1937 was \$2.50 per acre. The rate for applying agricultural limestone varied somewhat by areas depending largely upon the average cost of limestone in the area. The rate in the North Central States was \$1.25 per ton. The rate in the Southern States was \$1.40 per ton. In the East Central States the rates varied from \$1.50 per ton to \$3.00 per ton and in the Northeastern States the rates varied, depending on the average cost of limestone in the county, from \$2.50 to \$5.00 per ton.





The 1938 program is similar in its essential features and in many of its details to the 1936 and 1937 programs. Some changes in form have been made which we feel will increase the effectiveness of the program but the objectives remain unchanged. These objectives, as most of you know, are the conservation and improvement of the nation's soil and the maintenance - insofar as is possible under present law - of farm purchasing power. These aims are inseparable to a large extent. We cannot improve our soil resources through better balanced farming without helping farm purchasing power. Soil improvement means a substantial shift out of the principal soil-depleting crops, corn, wheat and cotton, to the leguminous crops. In turn, this contributes to stability of agricultural production and to stability of farm income.

Under the 1938 program a total farm payment will be computed. The farmer will earn the total payment for the farm if his acreages of soil-depleting crops in 1938 do not exceed the soil-depleting goals or acreage allotments that are established for the farm and if the units of soil-building practices carried out equal the soil-building goal established for the farm. If the farmer plants an excessive acreage of soil-depleting crops or fails to carry out the required number of units of soil-building practices, the farm payment will be reduced. The rate of reduction for failure to meet the soil-building goal is \$2.00 for each unit of soil-building practices by which the farmer fails to meet his goal.





For purposes of illustration, let us assume that in the case of a 100-acre farm a soil-building goal of 25 units has been determined. This means that if the farmer is to receive full payment and escape deductions, he must carry out 25 units of soil-building practices in addition to keeping the acreages of soil-depleting crops within the goals established for these crops. There are a number of practices which the farmer can carry out and for which he will receive credit in meeting the soil-building goal. Generally speaking, these practices are much the same as those for the 1936 and 1937 programs.

For example, credit at the rate of two units per acre seeded will be given for seeding alfalfa and other perennial legumes, and for seeding bluegrass. One unit credit is given for applying 300 pounds of 16-percent superphosphate to soil-conserving crops or to pastures. The rate of credit for the application of limestone will vary from area to area depending upon the average cost of limestone. In areas where the average cost of limestone to farmers is less than \$1.50 a ton, the rate of credit is one unit for each 3,000 pounds of limestone applied. In areas where the average cost of agricultural limestone to farmers is between \$1.50 and \$2.50 a ton, the rate of credit is one unit for each 2,000 pounds applied. In areas where the average cost is determined to be between \$2.50 and \$3.50 per ton, the rate of credit will be one unit for each 1,500 pounds of limestone





applied. In areas where the average cost is determined to be between \$3.50 and \$5.00 per ton, 1,000 pounds of limestone will be counted as one unit, and in areas where the average cost of limestone is in excess of \$5.00 per ton, 800 pounds of limestone will be counted as one unit toward meeting the soil-building goal. In many areas, an application of less than 1,000 pounds per acre of ground limestone will not be counted, and in some areas the maximum application for which credit will be given will be three or four tons per acre.

Final determinations have not been made with respect to the exact boundaries of all of the areas in which the different rates of applications of ground limestone will apply. On the basis of available information, however, it is probable that the areas will be about as follows:

The 2,000-pound-per-unit application will apply in the States of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, Tennessee, most of Kentucky, and in parts of the States of North Carolina, Virginia, and West Virginia. The 1500-pound-per-unit application will apply in the States of Oklahoma, Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, and parts of North Carolina, Virginia, West Virginia and Maryland. The 1000-pound-per-unit application will apply in New York and Pennsylvania, and in parts of





Vermont, Massachusetts, Connecticut, Maryland, and Virginia.

The 800-pound-per-unit application will apply in Maine, New Hampshire, Rhode Island, New Jersey, Delaware, and parts of Maryland, Connecticut, Massachusetts, and Vermont.

Under another practice included in the 1938 program one unit of credit will be given for applying 1,000 pounds of finely ground limestone (at least 90 percent to pass through a 30-mesh sieve) if such limestone is applied at the rate of not less than 500 pounds nor more than 1,000 pounds per acre. The rate of credit for this practice will be the same for all States in which this practice is approved. This practice is designed for those areas where it has been found that good results are obtained by applying between 500 and 1,000 pounds of finely ground limestone to legumes by drilling the limestone in at the time the crop is seeded.

The 1938 program contains another provision which may be of interest to many of you. The Soil Conservation and Domestic Allotment Act, under which the agricultural conservation programs are formulated, authorizes the Secretary to promote soil conservation by making of grants of aid as well as by making payments. Consequently, there has been included in the 1938 program a provision authorizing the Agricultural Adjustment Administration, wherever practicable, to furnish limestone, superphosphate, trees, seeds, and other materials to producers for use in carrying out approved soil-building practices. Thus far, no use has been made





of this provision in connection with limestone. I am not in a position to say to what extent, if any, it will be employed in connection with the use of limestone in the future, or just how it will be used if it is found practicable in certain instances to furnish limestone to farmers as a grant of aid in lieu of a payment.

Thus far, phosphate is the only material that has been furnished to farmers under the Agricultural Conservation Program. In connection with the 1937 Agricultural Conservation Program an arrangement was entered into between the Agricultural Adjustment Administration and the Tennessee Valley Authority whereby triple superphosphate manufactured by the Tennessee Valley Authority was furnished to farmers by the Agricultural Adjustment Administration. The triple superphosphate thus furnished is a highly concentrated phosphatic fertilizer developed by the Tennessee Valley Authority for educational purposes. It averages approximately 43 percent phosphoric acid or two to three times the phosphoric acid content of the usual commercial product. Farmers who obtained this triple superphosphate were required to pay the transportation and handling charges from Sheffield, Alabama, to the point of delivery. The amount of payments which farmers could receive for carrying out other practices on the farm was reduced in an amount equivalent to the payment which would have been received for the application of superphosphate had it been



purchased and applied in accordance with the provisions of the program.

In general, the procedure was as follows: Producers who desired to secure triple superphosphate submitted their requests to the committee in charge of the administration of the program in the county. When requests acceptable to the county committee for as much as a carload of triple superphosphate were received, the requests were transmitted to the State administrative office for examination and approval. The State office then transmitted the necessary forms and shipping instructions to the Tennessee Valley Authority. The triple superphosphate was immediately loaded into cars and shipped to the county in which the order originated. Upon arrival of the fertilizer, the producers obtained the phosphate by paying their pro rata share of the transportation and handling charges. The producer agreed to apply the material to pastures, alfalfa or other specified soil-conserving crops.

This arrangement proved highly satisfactory to all concerned. In the areas where triple superphosphate furnished by the Agricultural Adjustment Administration was available, the amount of phosphoric acid applied to soil-conserving crops increased sharply and a much larger percentage of the soil-building allowance was used for this purpose than would have been the case had the material not been furnished to farmers. The activities





of the Tennessee Valley Authority, directed toward improving and cheapening plant food materials, determining their most effective use, and carrying the results of such experience to practical farmers, were made much more effective. Farmers in the area where this material was available became acquainted with phosphatic fertilizer in a new form and for new uses. The introduction of this new product to farmers may pave the way for the commercial development of a more highly concentrated commercial fertilizer. In turn, this may bring about reduced transportation and handling costs and result in increased use of plant food at lower costs to farmers.

There are several factors in connection with this project which are likely to be taken into consideration in connection with any future projects of a similar nature. First, the project involved the use of a product which was being produced in only limited quantities by commercial concerns. It thereby tended to acquaint farmers with the use of a new product, or rather an old product in a new, highly concentrated form which can be shipped much more economically than the usual commercial product.

Second, the furnishing of the material was an alternative offer to farmers, and no farmer was obliged to use the product furnished by the Agricultural Adjustment Administration. The offer of a payment for the application of purchased phosphate





was available at all times. Thus, every farmer could choose between buying the material on the market and securing a payment from the Government, or getting the material from the Government and receiving no payment.

Third, the cost to the Government was approximately the same regardless of the procedure followed. The amount paid to the Tennessee Valley Authority was virtually the same as the sum which otherwise would have been paid to farmers for the application of the same amount of phosphoric acid to soil-conserving crops.

Fourth, this project seems to point the way to a partial solution of the credit problem which is so serious with farmers. Many farmers who want to cooperate in the program, and who need its benefits, are prevented from doing so because of lack of funds to carry out soil-building practices for which payment is made under the program. Payments for these practices ordinarily are not made to farmers until several months after their performance.

Fifth, to a large extent the material furnished to farmers represented an addition to, rather than a substitution for, superphosphate which otherwise would have been used. In areas where the triple superphosphate was used extensively in 1937 the amount of phosphoric acid applied to conserving crops was much greater than under the 1936 program when payments alone were offered.



Should a similar project be attempted with respect to agricultural limestone, I feel confident that the results would be similar. Any limestone furnished to farmers as grants of aid would, I believe, represent largely a net increase in the use of agricultural limestone.

In this connection I wish to quote from two letters which recently came to my attention. Both letters urged that limestone be furnished to farmers as grants of aid in lieu of payments.

One letter states,

" ..... the main reason why the spreading of lime is neglected until so late towards fall is because so many of the small producers are short of funds and hate to borrow for so long a time.

"I believe having a grant on lime would cause a more even distribution of lime during the year and thus agriculture would be benefited and more would use it that did not otherwise."

The other letter states,

" ..... There is a strong desire for lime here due to good results but present prospects are for a scanty supply."

Such letters speak for themselves. They indicate clearly that the producers of agricultural limestone and the administration have a mutual interest in any project that may be undertaken for furnishing limestone to farmers in addition to making payments to farmers who purchase the limestone. Such a project would mean a larger total volume and a better seasonal distribution of





limestone deliveries to farmers. From the standpoint of your industry, this means a larger volume of business and perhaps lower operating costs per unit. From the standpoint of the government, it means wider adoption of an improved farming practice which will be highly effective in promoting soil conservation and efficient farming. From the standpoint of the farmer it will mean finer legume crops and pastures and freedom from a credit burden which is one of the most important factors in preventing more widespread adoption of soil-building practices.

Since we have a common interest in the increased use of agricultural limestone, I feel confident that the fine relationship between agricultural limestone producers and the Agricultural Adjustment Administration will continue.

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